

**REMARKS**

Claims 1, 2 and 4-11 now stand in the application, claim 3 having been canceled and its limitations incorporated into claim 1, and new claim 11 added. Reconsideration of the application and allowance of all claims are respectfully requested in view of the above amendments and the following remarks.

Submitted herewith is a replacement drawing of Fig. 1 to address the objection to that Figure.

Claims 1, 2 and 9 are rejected under 35 U.S.C. § 102(e) as being anticipated by U.S. Patent No. 6,888,667 to Nicolaescu; claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Nicolaescu in view of Suto et al. (*Journal of Lightwave Technology*, Vol. 20); claims 8 and 10 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nicolaescu in view of Onishi et al.; and claims 4-7 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Nicolaescu, in view of the Examiner's Official Notice. These rejections are respectfully traversed.

With regard to claims 1-8 and 11, all depend directly or indirectly from claim 1, which now incorporates the subject matter of original claim 3. Accordingly, our discussion will begin with the rejection of claim 3 for unpatentability over the combined teachings of Nicolaescu and Suto et al.

Claim 3 is directed to the structure shown generally in Fig. 1 where the waveguide layer 106 has a rib-like structure. Nicolaescu does not teach or suggest anything which might be considered to satisfy this language. Suto teaches a buried waveguide section which is

surrounded by a cladding material, but does not teach a rib-like geometry. Accordingly, claim 3 – now claim 1 – is believed to patentably distinguish over the applied art. Claim 9 has been amended similarly to claim 1, and new claim 11 has been added to further define the rib-like structure of claim 1.

With respect to claim 4, the only basis the examiner has provided for his rejection of those claims is Official Notice that those claims recite conventional properties of a waveguide fabricated on a substrate. Applicant respectfully traverse the rejection, and requests that the examiner cite some support for the prior art teaching of the subject matter of these claims. For example, applicant is not aware of the use of isotopically purified crystalline material as recited in claims 4 and 5, which leads to a better ability to adapt the Stokes shift more precisely to pump the signal.

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

An extension of time is requested, and the statutory fee is being paid through the Electronic Filing System

Amendment Under 37 C.F.R. § 1.111

USSN 10/825,120

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

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